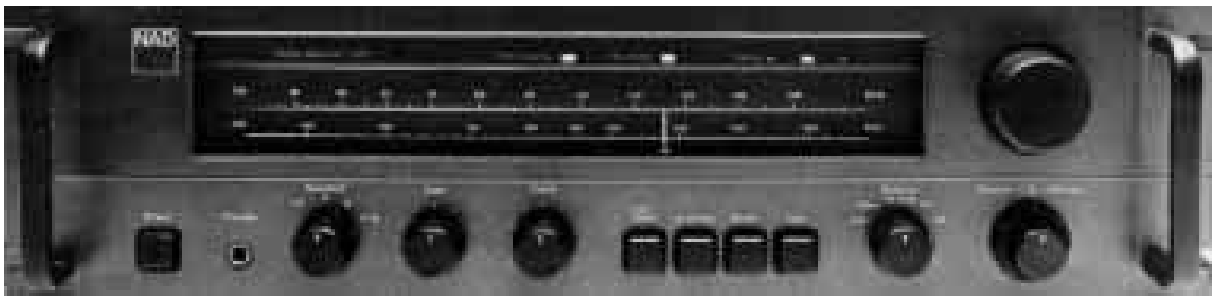
7020 Stereo Receiver

Date of manufacture : ? - Jan 83

Please note that this document contains the text from the original product brochure, and some technical statements may now be out of date



The NAD 7020 receiver is logically designed for optimum performance and ease of operation at an economical price. An unusually high proportion of its cost is devoted to circuit engineering and electronic parts rather than to elaborate styling, seldom-used controls or esoteric features. This results in a sound quality equal to many of the finest sepa-rate audiophile components.

Every circuit in the 7020 is tested to deliver its full per-formance in everyday use, not just under controlled labora-tory conditions. Competing products may have similar power and THD ratings, but in actual use the 7020 is typi-cally easier to tune, less prone to background noise with either FM or phono, and when connected to the most de-manding loudspeakers, better able to reproduce the full impact and tonal richness of live music. The 7020 receiver produces volume levels far greater than would be expected from its conservative 20-watt per channel power rating, due to the high-voltage, high-current output stage and unique "Soft Clipping"™ circuit. Recent dramatic advances in FM tuner technology have been incorporated in the 7020 as well, for especially high sensitivity, wide stereo separation and low distortion.

STATE-OF-THE-ART CIRCUITRY

Wide-range Phono Preamplifier. Instead of the economy preamp circuit often found in budget-priced receivers, the NAD 7020 contains a sophisticated 6-transistor phono Advanced Tuner IC Circuitry. The 7020's FM tuner section employs a junction FET "front end" for sensitive tuning of weak signals; a total of three (rather than one or two) ceramic I.F. filters for sharp selectivity, cleanly separat-ing adjacent stations on the crowded FM dial; and the latest PLL multiplex decoder for wide stereo separation with low distortion. FM reception in direct comparisons has proven to be audibly identical, in both sensitivity and sound quality, to many costlier separate tuners. Yet it is very easy to tune: a set of three LED lights indicate exact tuning and signal strength. The 7020's AM reception, aided by an adjustable ferrite rod aerial, provides good suppression of static and adjacent channel interference.

EFFECTIVE CONTROL FEATURES

Like every other part of its design, the NAD 7020's controls have been carefully selected for genuine usefulness. The preamp stage which is audibly identical to some of the best separate preamps. Its distortion is extremely low even with complex music signals, it is quiet enough for use with either moving-magnet or high-output moving-coil pickup car-tridges, and its 107 dB dynamic range is ample for the digitally-mastered recordings of the 1980s.

High-Voltage, High-Current Output Stage

It's not difficult to design an amplifier to deliver 20 watts/channel to an 8-ohm test resistor. But real loudspeaker impedances are usually lower than 8 ohms and "reactive", requiring greater reserves of voltage and current in the amplifier. The NAD 7020 employs a high-current power supply and the same rugged output transistors found in many "60-watt" receivers, so it is able to drive any speaker impedance (even as low as 2 ohms) to high levels with low distortion.

Soft Clipping™

When the 7020 is overdriven beyond its rated power, this exclusive NAD circuit gently limits the waveform voltage, ensuring that the output transistors are never driven into saturation or "hard clipping". Conse-quently the 7020 can produce remarkably high peak volume levels without sounding harsh or distorted.

Infrasonic and Ultrasonic Filters

In everyday listen-ing, audio signals often are contaminated with interference at frequencies below and above the range audible to the ear - turntable rumble, acoustic feedback, and radio inter-ference for example. The 7020 strips off this interference so that only clean musical waveforms are amplified. Bass and Treble controls are tailored for musically effective response in the high and low frequencies without altering the critical mid-range tonal balance. For listening at low volume levels or with sensitive head-phones, the 7020's Audio Muting switch expands the useful range of the Volume control and subdues any residual circuit noise.

Separate "Preamp Out" and "Power Amp In" jacks are provided on the rear panel of the 7020 for insertion of an equalizer, dynamic range expander or time-delay unit. For the student or first-time stereo shopper, the "no-frills" design and moderate price make the NAD 7020 an ideal choice; for the music-lover seeking uncompromised per-formance, few receivers at any price will sound as good in everyday use.

PRE-AMP SECTION

Phono input		
Input impedance *(R and C)*		47kΩ / 47pF
Input sensitivity, 1kHz		2.5mV ref. 20W
Signal/Noise ratio *(A-weighted with cartridge connected)*		75dB ref. 5mV
THD *(20Hz - 20kHz)*		<0.02%
Line level inputs		
Signal/Noise ratio *(A-weighted ref 1W)*		86dB
Frequency response *(20Hz - 20kHz)*		±0.5dB
Infrasonic filter		-3db at 15Hz, 24dB/octave

POWER AMP SECTION

Continuous output power into 8Ω *		20W (13dBW)
Rated distortion *(THD 20Hz - 20kHz)*		0.02%
IHF Dynamic headroom at 8Ω		+3dB
IHF dynamic power *(maximum short term power per channel)*	8Ω	40W
	4Ω	58W
	2Ω	72W

FM TUNER SECTION

Input sensitivity	Mono -30dB THD+N	10.8dBf (1.9µV)
	Stereo 50dB S/N	16dBf (3.5µV)
	Stereo 60dB S/N	37dBf (40µV)
Selectivity, alternate channel		65dB
Harmonic distortion	Mono	0.2%
	Stereo	0.3%
Signal/Noise ratio	Mono	75dB
	Stereo	70dB
Frequency response ±0.5dB		30Hz - 15kHz
Channel separation at 1kHz		42dB

AM TUNER SECTION

Usable sensitivity	250µV
Image rejection	50dB
Remote	No
NAD Link	No

PHYSICAL SPECIFICATIONS

Dimensions (W x H x D)	420 x 119 x 240mm
Net weight	6.8kg
Shipping weight	8.4kg

* Minimum power per chnnel, 20Hz - 20kHz, both channels driven with no more than rated distiortion.

Dimensions are of unit's cabinet without attached feet; add up to 18mm for total height.

Dimension depth excludes terminals, sockets, controls and buttons.

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